Readiness Reality Check: Exploring Career Readiness in Undergraduate Research

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Research Research

Introduction and Background

Career Readiness in Undergraduate Research (UR)

- Academic, personal, and professional outcomes associated with participation in UR are well documented.
- Career readiness skill development is an **emerging area of research in the field**.
- UR has historically been a mechanism for developing skills for graduate school/professional school.
- Framing of UR to develop Career Readiness skills shifts the importance and impact from undergrads interested in **grad/professional school to all students**.

The NACE Career Readiness Framework

- Career readiness is measured through **eight core competencies** defined by the National Association of Colleges & Employers (NACE).
- Without guidance, a deep understanding of these professional standards can be difficult to contextualize for undergraduates.
- There are very **limited empirically tested measures** of NACE's Career Readiness competencies.

The Context

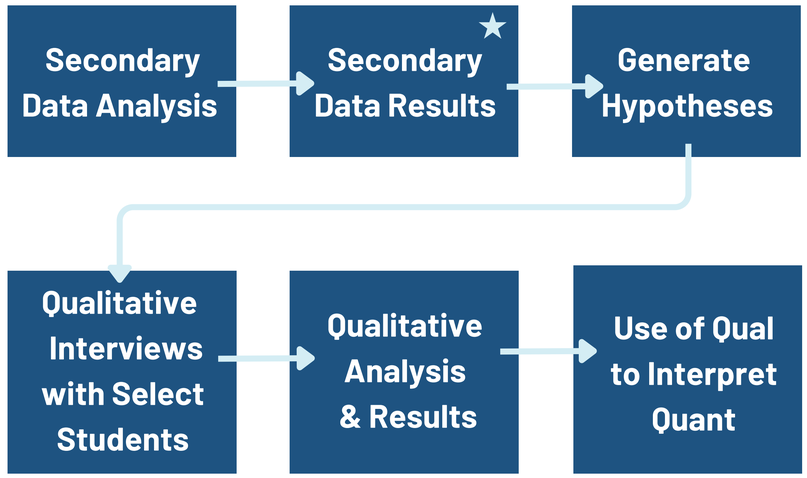
- The First-Year Innovation & Research Experience (FIRE) at the University of Maryland adapted the NACE Career Readiness Measurement Framework in Fall 2024 to assess student skill development.
- Initial assessment of the first FIRE Cohort using this tool indicated **ceiling effects** and potential **social desirability bias**, with **first-semester students rating themselves as skilled in "advanced application"** of NACE Skills.

Initial Hypothesis: The Dunning-Kruger Effect

- *Overrating often stems from a cognitive bias where individuals with limited self-awareness overestimate their competence.*

Methodology

Sequential Explanatory Mixed-Methods Study



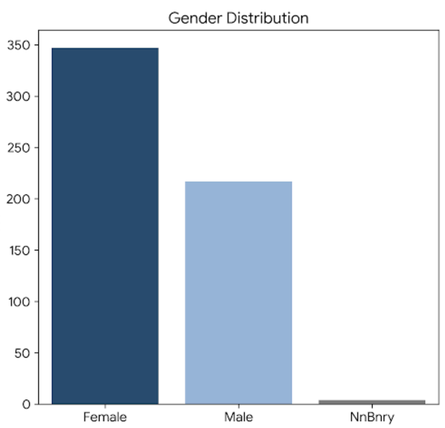
Secondary Data Analysis

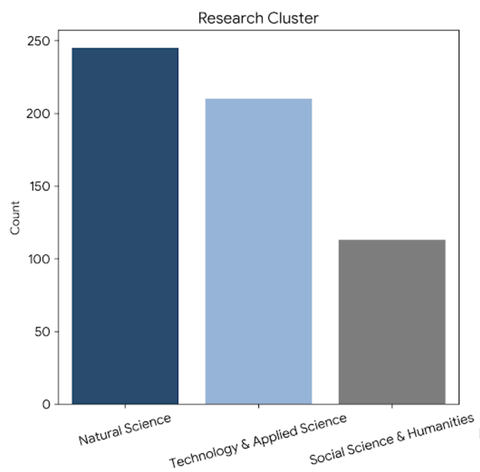
- Utilized RStudio & Python to clean and analyze one **de-identified cohort of FIRE students'** self-reported career readiness competency measures.
- Identification of over- and under-raters in addition to trends in the data set based on **FIRE Stream Cluster**, **Gender**, and **Major** comparisons

Initial Results Secondary Data Analysis

Overview of Demographics

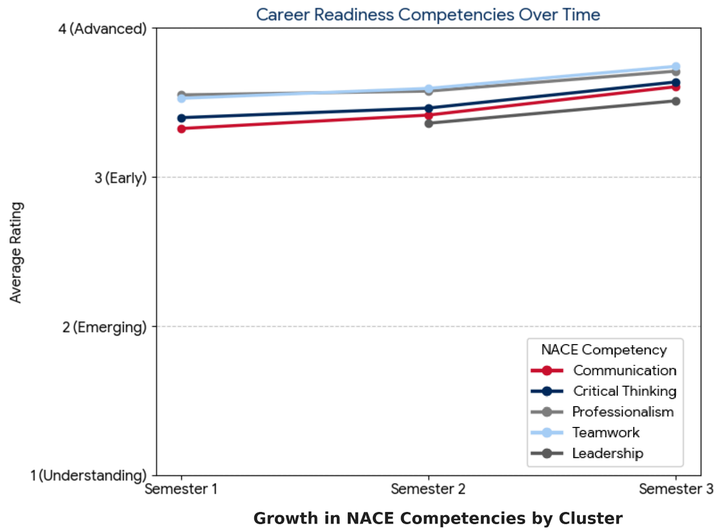
- Gender: The majority of participants identify as Female (347), followed by Male (217).
- Research Cluster: Participation is highest in the Natural Science (245) and Technology & Applied Science (210) clusters.
- Academic College: The College of Computer, Mathematical, and Natural Sciences (CMNS) is the most represented college in the dataset, significantly outnumbering others.

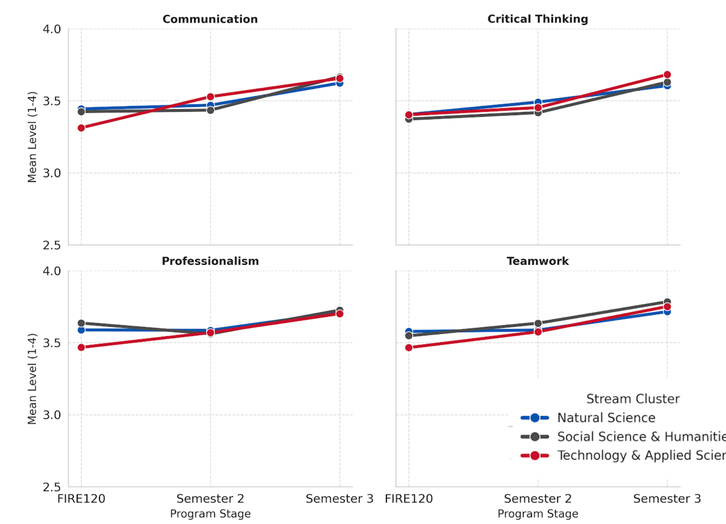




Initial Results

Career Readiness Measurement





Next Steps

Qualitative Data Collection & Analysis

- Invitation to students who completed FIRE Semester 3 to participate in semi-structured interviews.
- Aim to interview 10-15 students from subgroups of self-identified "overraters" to learn more about student research expereinces, understanding of NACE Competencies, & experience engaging with the survey measures.

References & Acknowledgements

VIP Vertically Integrated Projects